

5 December 1989

MEMORANDUM FOR Construction Engineering Research Laboratory, Attn: Al Beitelman, Corps of Engineers, P.O. Box 4005, Champaign, Illinois 61820-1305

SUBJECT: Epoxy Paint Test at L/D 8, Genoa, WI

1. BACKGROUND:

On 19 September 1989, I attended a short seminar on the use of epoxy paint coatings on water control structures such as roller, tainter, and sluice gates. These epoxy systems are high-solid coatings with far less solvents than the vinyl systems. Since the St. Paul District was painting roller gates at Lock 8, I thought it would be a good idea to try the epoxy on one roller gate.

After consultation with the local distributor for Ameron, the decision was made to use Amerlock 400 (gray) for the first coat and Amerlock 400 (dark red) for the second coat and apply Amershield high-build polyurethane as a top coat.

2. OBSERVATIONS:

The first epoxy was applied on 25 October 1989. A technical representative from Ameron was on hand to advise the crew on mixing and application. The temperature was 70°F with a moderate breeze. The painters found that the epoxy was much faster and easier to apply than the vinyl. There is a tendency, at first, for the painters to get too many mils of the epoxy. But as they gained experience they were able to get the proper (13-14 mils) thickness. Drying time for the epoxy is longer than for vinyl but at 70° it was dry to the touch after slightly more than one hour.

Painting continued on the 26th with the second coat of dark red being applied as soon as the first coat was dry. All paint was applied to a near white surface. The exterior of the roller, the fins, and all but two bays under the hood were painted with epoxy. The distributor did not receive the polyurethane top coat in time for the crew to put it on. Temperatures were rapidly becoming too cold for painting, so it was decided not to use the top coat. The roller gate was put back in service on 13 November after two weeks drying time.

3. CONCLUSIONS:

Generally everyone agreed that the epoxy is much faster and easier to use than vinyl. Even considering that it is quite a bit more expensive, I believe that with the time saving, the costs should be about equal.

If the epoxy proves to be as desirable as vinyl and is approved for use on Corps structures, I would recommend that the gray color be selected as standard, since, according to the manufacturer, it weathers better than other colors.

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